

Rec'd PCT/ISA 28 APR 2005

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/11929

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C7/13 C07C2/24 C07C41/05 C07C45/49 C08F10/10  
C07C2/54 C07C2/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C C08F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 440 885 B1 (PIEROTTI KIM D ET AL) 27 August 2002 (2002-08-27) column 7, line 61 column 8, line 33 ----- WO 01/37989 A (BASF AG ;WALTER MARC (DE); HEIDEMANN THOMAS (DE)) 31 May 2001 (2001-05-31) cited in the application page 3, line 9 - line 22 -----	1-9
Y	EP 0 481 660 A (BRITISH PETROLEUM CO PLC) 22 April 1992 (1992-04-22) cited in the application page 5, line 18 - line 20 -----	1-9
A		1-9 -/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
4 June 2004	15.06.04
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer O'Sullivan, P

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PCT/EP 03/11929

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 309 281 A (DESSAU RALPH M) 5 January 1982 (1982-01-05) examples 30-36	1-9
Y	EP 0 405 781 A (CHEMICAL RES & LICENSIN) 2 January 1991 (1991-01-02) cited in the application page 3, line 37 - line 40	1-6
Y	GB 690 149 A (BASF AG) 15 April 1953 (1953-04-15) example	1-6
Y	US 5 910 550 A (RATH HANS PETER) 8 June 1999 (1999-06-08) claim 1	1-6
Y	WO 01/46095 A (DAKKA JIHAD M ; GEELEN MARC (BE); MATHYS GEORGES M K (BE); ALLEN PAUL) 28 June 2001 (2001-06-28) claims 1,2	1-6
Y	US 2002/087040 A1 (DI GIROLAMO MARCO ET AL) 4 July 2002 (2002-07-04) paragraph '0015!	1-6

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/EP 03/11929

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

**see supplemental sheet**

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

The International Searching Authority has determined that this international application contains more than one invention or group of inventions, namely:

1. Claims 1 to 6 in part, and 7 to 9:

Method of preparing oligomers according to claim 1, steps a and b.

2. Claims 1 to 6 in part:

Method of producing methyl-tert-butylether, isovaleraldehyde, polyisobutylene, 2,4,4,-trimethyl-1-pentene or saturated hydrocarbon compounds with eight carbon atoms, according to claim 1, steps a and c1 to c5.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/EP 03/11929

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
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International Application No

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